

**U.S. EPA Environmental Technology Verification Program
Advanced Monitoring Systems (AMS) Center**

Water Stakeholder Committee Teleconference

Thursday, September 14, 2006

1:00 pm – 3:00 pm *Eastern*

Teleconference Meeting Minutes

AGENDA

Welcome, Agenda, and Meeting Objectives	Rachel Sell, Battelle
Stakeholder Homework Question: <i>Sustainability, what does it mean to you?</i>	Rachel Sell/ Stakeholders
Program Updates <ul style="list-style-type: none">▪ ETV Program Funding & Future Directions▪ AMS Center Completed and Ongoing Verifications	Amy Dindal, Battelle
Test/QA Plan Discussion - Sensicore Multi-parameter Water Sensor	Ryan James, Battelle
Discussion of Evolving Technology Categories <ul style="list-style-type: none">▪ Ballast Water Monitors▪ Chemical Oxygen Demand Techniques▪ Groundwater Sampler▪ Estrogen ELISA Test Kits▪ Nutrient Monitoring Technologies – Environmental Applications▪ Multi-Parameter Water Quality Probes (Round 3)	Amy Dindal
<ul style="list-style-type: none">▪ Microcystins ELISA Test Kits▪ Temperature-Data Logging Technologies	Ryan James
Hot Topics – What’s on the horizon?	Rachel Sell
Next Meeting and Action Items	Rachel Sell
Adjourn	

ATTENDEES

Stakeholder Committee Members:

Marty Link, Nebraska Department of Environmental Quality
Alan Mearns, Hazardous Materials Response Division, National Oceanic and Atmospheric Administration (NOAA)
Vito Minei, Division of Environmental Quality Suffolk County Department of Health Services
Lisa Olsen, U.S. Geological Survey (USGS)
Rick Sakaji, California Department of Health Services
Peter Tennant, Ohio River Valley Water Sanitation Commission (ORSANCO)

ETV AMS Center Staff:

Amy Dindal, Battelle
Ryan James, Battelle
Bob Fuerst, EPA/RTP
Rachel Sell, Battelle

Welcome, Agenda, and Meeting Objectives

Rachel Sell, Battelle AMS Center Stakeholder Committee Coordinator, welcomed the committee stakeholders to the third AMS Center Water Stakeholder Committee teleconference of 2006. She then proceeded with an overview of the agenda and took roll call of those stakeholders participating in the teleconference.

Stakeholder Homework Question

Ms. Sell introduced a new topic on the agenda, a “homework question”, which was sent out via email prior to the teleconference. Stakeholders were asked to consider the topic of sustainability and answer the questions: 1) what does sustainability mean to you or your organization, 2) how can we make sustainability a part of ETV testing? Ms. Sell stated that sustainability is not only a part of EPA’s philosophy, but part of industry’s as well.

Bob Fuerst, EPA Project Officer for the AMS Center, noted that EPA lists a formal definition on their website and that sustainability seems like a balancing act of the growing economy and the protection of human health and the environment, while not overlooking the next generation.

All stakeholders provided input on what sustainability meant to them. Alan Mearns said that it is part of NOAA’s strategic plan. Marty Link said that sustainability is working with resources you have, while not taking away from the future and cited an example of water irrigation resources. Lisa Olsen said that it is difficult for government agencies because of the funding cycles in government. Amy Dindal, Battelle AMS Center, said that vendors currently report to ETV how they are achieving sustainability, but asked if there was a way to include sustainable type metrics into verification tests (e.g., report the volume of hazardous waste). In response, the stakeholders indicated that other examples of sustainability criteria might include a description of servicing intervals and types of power supplies used by the technology.

Vito Minei noted that sustainability is an overarching theme in Long Island as they are trying to incorporate smart growth and reduce suburban sprawl. They are utilizing groundwater and surface water models to determine how to preserve drinking water and sustain recreational life. In terms of equipment, he said his organization expects equipment to be replaced rather than anticipate using it for 10 years. He hopes that remote sensing will start to take hold even more, to prevent site visits and maintenance to the equipment at field or remote sites. They have had to burn a lot of fuel on boats while traveling to service equipment. Alan Mearns noted a similar experience within NOAA.

Mr. Minei summarized what he thought he was hearing from other stakeholders:

- 1) replace staff dependent equipment with remote sensing or telemetry that reports back to a central location or as Ms. Olsen explained “self-servicing or self-cleaning equipment”;
- 2) agencies to stay current with emerging topics (e.g., data recorders that run on solar power versus heavy metal-filled batteries); and
- 3) despite government funding cycles, agencies to maintain budget to stay current.

Program Updates

Ms. Dindal provided an update on the ETV Program and AMS Center. Ms. Dindal and Mr. Fuerst attended an ETV team meeting in Cincinnati, Ohio in early September. Ms. Dindal said that during the meeting, Sally Gutierrez, Director of EPA’s National Risk Management Research Laboratory (NRMRL), within the Office of Research and Development (ORD), said that technology is one of the centerpieces of ORD’s multi-year strategy and views the ETV Program as a core competency within the technology area. The multi-year plan is located at <http://www.epa.gov/sustainability/releasepubcommnt.html>.

Regarding the AMS Center, Ms. Dindal summarized recent water, water security, and air verifications that have either completed or are in-progress. So far in FY06, verification reports have been completed for 18 technologies. Several verification reports will be completed in FY07. The beach monitoring verification has been cancelled for Fall 2006 due to several of the vendors withdrawing from the verification. Ms. Dindal thanked Mr. Minei and his organization for their time and in-kind support. The AMS Center will generate a beach monitoring generic protocol and will have the contents of a test/QA plan ready if testing moves forward in the future.

Finally, Ms. Dindal noted that 15 verifications have been completed for rapid toxicity testing of water, but none in soil. EPA’s Office of Solid Waste and Emergency Response (OSWER) is interested in this type of testing. Development of a generic protocol for a soil rapid toxicity technology verification will begin soon.

Test/QA Plan Discussion - Sensicore Multi-parameter Water Sensor

Ryan James, Battelle AMS Center Verification Test Coordinator, discussed the test/QA plan for the Sensicore multi-parameter water sensor. Collaborators for the test include EPA’s National Exposure Research Laboratory (NERL) and the City of Columbus, Ohio. He reviewed the experimental plan which includes both field analyses and laboratory testing of water samples. Dr. Mearns asked if the Sensicore system could be applied to saltwater. Dr. James stated the

vendor confirmed the technology has not been tested in saltwater yet, and therefore, is not sure if it can be applied to saltwater. Rick Sakaji suggested comparing the field samples with a reference method. To address this stakeholder suggestion, reference analyses will be added and compared to several field samples as part of the testing with the City of Columbus.

Discussion of Evolving Technology Categories

Ms. Dindal provided an update on several evolving technology categories.

Vendor recruitment for the **Ballast Water Monitoring** verification will be initiated once co-funding is secured. Dr. Mearns said that he had heard about problems of non-indigenous species being released during ballast water exchange.

Aqua Diagnostics has a field portable **Chemical Oxygen Demand (COD) Technique** that is currently in the prototype testing stage. They are interested in participating in a verification test hopefully by Spring 2007. On an earlier teleconference, stakeholder Ken Wood expressed interest in COD techniques, as COD measurement is routinely conducted at their wastewater treatment facilities.

Dakota Technologies has expressed interest in testing a new diffusion **groundwater sampler** for groundwater monitoring, including volatile organic compounds. Information about this technology can be found at:

http://www.dakotatechnologies.com/?id=101&content=templates/news_detail.tpl. Ms. Dindal said that other groundwater sampling devices have been tested previously under ETV.

Following up on a question from Dr. Mearns, Ms. Dindal would check to see if the groundwater sampler could sample for polycyclic aromatic hydrocarbons. Stakeholder concurrence for proceeding with this technology category was received. Ms. Olsen suggested contacting Don Vroblesky with the USGS in South Carolina as he has done a lot of work in this area and would be an ideal peer reviewer. (Post-meeting note: Don Vroblesky can be reached at (803) 750-6115, or at vroblesk@usgs.gov.)

Regarding a verification of **Estrogen ELISA test kits**, Ms. Dindal noted there is continued interest but limited co-funding to support a verification test. She also noted that she made the connection between EPA Region 3 and the Interstate Commission on the Potomac River Basin (ICPRB) per Ms. Olsen's suggestion during the last teleconference. Ms. Dindal said the plan is to cycle back to EPA Region 3 and other potential collaborators in FY07.

Testing of **Nutrient Analyzers** has two applications, which include industrial and environmental monitoring. Industrial monitoring was conducted in 2005 in collaboration with DuPont for two technologies. Currently, Greenspan and EnviroTech are two vendors interested in the environmental monitoring application. Potential collaborators and co-funding opportunities for this technology category are being sought.

Hach has approached the AMS Center with interest in the verification of a multi-parameter instrument. Previous testing of **Multi-Parameter Water Quality Probes** was conducted in

collaboration with NOAA in open water sources. Stakeholder concurrence was received for this category. The AMS Center will identify interested collaborators.

Dr. James said there is a possible collaboration for verification of **Immunoassay Test Kits for Microcystins**; Battelle is currently in discussions with EPA Region 9 as well as EPA NERL. A lot of interest remains in this area.

Dr. James described a new technology category. Data from **Temperature-Data Logging Technologies** are important in bodies of water in which temperature is critical to the fish population. The USGS is looking to employ a fiber optic sensor technology. The accuracy of the devices is driving the interest in this area. Stakeholders had no objections in pursuing this technology category.

Hot Topics

Ms. Sell asked the stakeholders if they were aware of any new opportunities that the ETV/AMS Center should be exploring, and when making a recommendation, to try to indicate the level of importance or priority the technology category exhibits.

The stakeholder committee indicated that non-membrane **Dissolved Oxygen (DO) Probes were still a priority area**. Ms. Dindal reminded stakeholders that the AMS Center's proposal to New York State Energy Research and Development Authority (NYSERDA) on DO Monitors was not funded, so co-funding for this test would need to be obtained in order for the test to move forward. She noted the Hach Hydrolab instrument had a non-membrane DO probe (see "Discussion of Evolving Technology Categories"). A stakeholder added that YSI also has a probe technology that could undergo verification.

Mr. Minei said that his organization is getting more and more involved in soil investigations at agricultural sites. Ms. Dindal noted the upcoming verification for rapid toxicity in soil is a new verification in the soil area.

Next Meeting and Action Items

Ms. Sell said that one year had passed since the last in-person meeting in Portland, Maine and that it was time to discuss a venue and date for the next in-person meeting. She recalled stakeholders at the Portland meeting suggesting having the next meeting in San Francisco, but because of construction and delays in and out of the city, suggested having the meeting nearby in Sacramento. Mr. Minei suggested the possibility of having the next meeting in Portland, Oregon. Ms. Sell noted that Sacramento was ideal because it was close to two of the water stakeholders, Dr. Sakaji and Ms. Olsen, and was located in EPA Region 9, making it convenient to obtain speakers and additional attendees, including those interested in test kits for microcystins and temperature-data logging technologies.

Stakeholders were amenable to the idea of having the meeting in Sacramento. Ms. Sell suggested sending an email to stakeholders to determine their availability for a meeting in the November – January timeframe.

Ms. Sell reviewed the action items brought forth on the call:

1. Ms. Olsen will forward the contact information for Don Vroblesky at USGS for the groundwater sampler technology category. (Action completed after the teleconference.)
2. Ms. Dindal will check with the vendor to see if the groundwater sampler can sample for polycyclic aromatic hydrocarbons.
3. Ms. Sell will send out an email to stakeholders to determine their availability for the next in-person meeting.

Ms. Sell thanked all of the stakeholders for attending the meeting and contributing so much to ETV. The call adjourned at 2:50 pm *Eastern*.